

ENGINEERING EXHIBIT

Incentive Auction Channel Reassignment

Application for Digital Television Station Construction Permit

prepared for

WGBH Educational Foundation

WGBY-TV Springfield, MA

Facility ID 72096

Ch. 13 30 kW 303 m

WGBH Educational Foundation (“*WEF*”) is the licensee of digital television station WGBY-TV, Channel 22, Facility ID 72096, Springfield, MA. *WEF* herein proposes construction of the WGBY-TV post-auction facility on Channel 13. Reassignment of WGBY-TV from Channel 22 to Channel 13 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice* (“*CCRPN*”, DA 17-317, released April 13, 2017).

The proposed Channel 13 operation will employ a new antenna system to be top-mounted on the WGBY-TV tower in lieu of the existing Channel 22 antenna. The antenna replacement will result in a 1.7 meter reduction in the structure’s overall height to 43.9 meters above ground level. Since the overall structure elevation is less than 61 meters above ground and passes the FCC’s TOWAIR program for the transmitter location, FAA notification and FCC antenna structure registration are not necessary.

WEF proposes to operate WGBY-TV with an effective radiated power (“ERP”) of 30 kW nondirectional at 303 meters antenna height above average terrain (“HAAT”). The proposed antenna is an elliptically polarized ERI model ATW7xVS5-ETOX-13H (96 percent vertical polarization). The horizontally polarized ERP is 30 kW and the vertically polarized ERP is 28.8 kW.

A map is supplied as Figure 1 which depicts the standard predicted coverage contours. This map includes the location of Springfield, WGBY-TV’s principal community. As

demonstrated thereon, the proposed facility complies with §73.625(a)(1) as the entire principal community will be encompassed by the 43 dBμ contour.

The proposed noise limited service contour (“NLSC”) extends beyond that of the *CCRPN* parameters of 1.24 kW ERP and 306 meters HAAT. WGBY-TV’s channel reassignment involves a band change from UHF to VHF. Pursuant to §73.3700(b)(iii) regarding band change stations, the proposed coverage contour may extend beyond that of the *CCRPN* parameters.

Interference study per FCC OET Bulletin 69¹ shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby post-auction full service and Class A television stations and reassignments as required by §73.616. The interference study output report is provided as Table 1. This satisfies §73.3700(b)(iii) for the proposed NLSC extension.

The proposed WGBY-TV facility’s terrain-limited population provides a 158.9 percent match of the *CCRPN* baseline facility, as detailed in the following table. The OET Bulletin 69 report summary in Table 1 also concludes that the proposed service area population is more than 95 percent of the baseline population.

Terrain Limited Population - Match of Reassignment

Population Summary (2010 Census) OET Bulletin 69: TVStudy	Reassignment Parameters	Proposed
Within Noise Limited Contour	2,742,155	4,470,009
Not affected by terrain losses	2,353,835	3,739,675
Match of Reassignment	---	158.88%

The site location is within the 360 km Canadian coordination zone (308 km to the Canada border). Customarily, proposals located beyond 300 km of the border are no longer referred to Canada, thus further coordination should not be required. Further, according to “TVStudy”

¹FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 (“OET-69”). This analysis employed the FCC’s current “TVStudy” software with the default application processing template settings, 2 km cell size, and 1 km terrain increment. Comparisons of various results of this computer program (run on a Mac processor) to the FCC’s implementation of TVStudy show excellent correlation.

analysis including non-US records from current FCC LMS data, no Canadian station would receive any new interference within Canada from the proposed WGBY-TV facility.

The nearest FCC monitoring station is 379 km distant at Belfast, ME. This exceeds by a large margin the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. The site is not located within the areas requiring coordination with “quiet” zones specified in §73.1030(a) and (b). There are no authorized AM stations within 3 kilometers of the site.

Human Exposure to Radiofrequency Electromagnetic Field (Environmental)

The transmitting location is the electronics site on Mount Tom overlooking the Springfield region. There are several other transmitting facilities at this site area situated on various antenna supporting structures, each within a fenced compound with RF exposure warning signs. *WEF* participates in a radiofrequency (“RF”) electromagnetic field exposure safety program, along with other broadcasters and FCC licensees that utilize the Mount Tom site area. Following construction of the proposed facility, *WEF* will conduct RF exposure measurements (and/or detailed calculations) to evaluate the level of RF exposure resulting from the WGBY-TV facility. As necessary, based on these results and considering all emitters, appropriate exposure abatement procedures will be established and followed, in order to comply with the FCC’s exposure limits. Such abatement procedures may involve the restriction of access to certain areas and/or facility modifications to reduce RF levels.

Considering the post-construction measurement and an appropriate abatement program, the general public and workers will not be exposed to RF levels attributable to the proposal in excess of the FCC’s guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, authorized personnel will be trained and/or supervised as necessary for access to any “controlled” areas. *WEF* will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower, or antenna from RF electromagnetic field exposure in excess of FCC guidelines. This exhibit is limited to the evaluation of exposure to RF electromagnetic field.

List of Attachments

Figure 1	Proposed Coverage Contours
Table 1	OET Bulletin 69 Interference Study
Form 2100	Saved Version of Engineering Sections from FCC Form at Time of Upload

Chesapeake RF Consultants, LLC

Joseph M. Davis, P.E.	June 26, 2017	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600



Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 1
Proposed Coverage Contours
WGBY-TV Springfield, MA
Facility ID 72096
Ch. 13 30 kW 303 m

prepared for
WGBH Educational Foundation

June, 2017

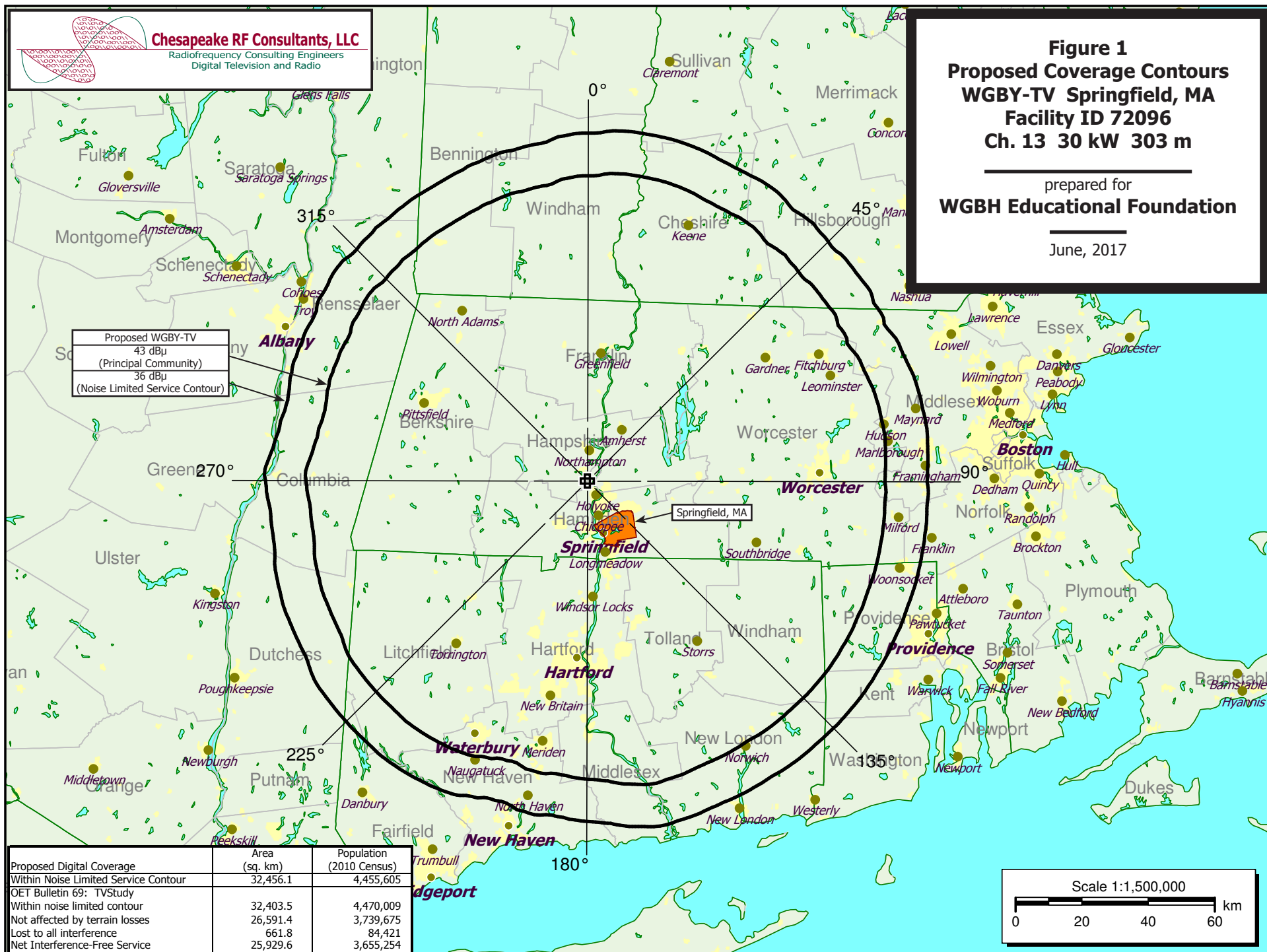
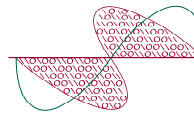


Table 1 WGBY-TV OET Bulletin 69 Interference Study
(page 1 of 8)



Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

tvstudy v2.2.2

Database: localhost, Study: WGBY-TV 30KW_PROP, Model: Longley-Rice
Start: 2017.06.26 08:29:40

Study created: 2017.06.26 08:29:31

Study build station data: LMS TV 2017-06-23 LMSTV

Proposal: WGBY-TV D13 DT APP SPRINGFIELD, MA
File number: WGBY-TV 30KW_PROP
Facility ID: 72096
Station data: User record
Record ID: 651
Country: U.S.

Stations potentially affected:

Call	Chan	Svc	Status	City, State	File Number	Distance
WNET	D12	DT	BL	NEWARK, NJ	DTVBL18795	204.4 km
WNYT	D12	DT	LIC	ALBANY, NY	BLANK0000004731	119.6
WNAC-TV	D12	DT	LIC	PROVIDENCE, RI	BLCDT20090612AFT	119.8
WHYY-TV	D13	DT	BL	WILMINGTON, DE	DTVBL72338	326.8
WABI-TV	D13	DT	LIC	BANGOR, ME	BLCDT20101215AIS	397.1
WNYI	D13	DT	CP	ITHACA, NY	BLANK0000025008	284.3
WNYI	D13	DT	BL	ITHACA, NY	DTVBL34329	284.3

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D13
Latitude: 42 14 29.50 N (NAD83)
Longitude: 72 38 54.10 W
Height AMSL: 402.3 m
HAAT: 303.2 m
Peak ERP: 30.0 kW
Antenna: Omnidirectional

36.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	30.0 kW	345.9 m	104.6 km
45.0	30.0	313.8	102.0
90.0	30.0	313.9	102.0
135.0	30.0	347.4	104.7
180.0	30.0	316.7	102.2
225.0	30.0	318.0	102.3
270.0	30.0	225.1	96.8
315.0	30.0	244.9	98.4

**Proposal service area extends beyond baseline plus 1.0%
Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 307.6 km

Distance to Mexican border: 2855.9 km

Conditions at FCC monitoring station: Belfast ME
Bearing: 48.4 degrees Distance: 378.2 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 276.2 degrees Distance: 2717.8 km

Study cell size: 2.00 km
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

Table 1 WGBY-TV OET Bulletin 69 Interference Study
(page 2 of 8)



Interference to DTVBL18795 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL18795 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL18795 BL, scenario 3
Proposal causes no interference.

Interference to DTVBL18795 BL, scenario 4
Proposal causes no interference.

Interference to BLANK0000004731 LIC, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WNYT	D12	DT	LIC	ALBANY, NY	BLANK0000004731	
Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	119.6 km
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	119.6
	WWLP	D11	DT	LIC	SPRINGFIELD, MA	BLCDT20090612AJV	123.0
	WNET	D12	DT	BL	NEWARK, NJ	DTVBL18795	212.6
	WYOU	D12	DT	BL	SCRANTON, PA	DTVBL17010	222.4
	WNAC-TV	D12	DT	LIC	PROVIDENCE, RI	BLCDT20090612AFT	239.4
	WNYI	D13	DT	CP	ITHACA, NY	BLANK0000025008	167.0

	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
	38151.4	1,967,183	31107.7	1,654,097	29907.2	1,622,811	29835.3	1,621,890	0.24 0.06

Undesired		Total IX	Unique IX, before	Unique IX, after
WGBY-TV D13 DT BL	64.0	1,389	4.0	93
WGBY-TV D13 DT APP	288.1	4,291		75.9 1,014
WWLP D11 DT LIC	91.9	1,693	20.0	12.0 44
WNET D12 DT BL	280.6	10,529	120.3	4,420 120.3 4,420
WYOU D12 DT BL	476.0	15,831	331.7	9,665 331.7 9,665
WNAC-TV D12 DT LIC	624.3	13,269	480.2	7,953 364.0 6,387

Interference to BLANK0000004731 LIC, scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WNYT	D12	DT	LIC	ALBANY, NY	BLANK0000004731	
Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	119.6 km
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	119.6
	WWLP	D11	DT	LIC	SPRINGFIELD, MA	BLCDT20090612AJV	123.0
	WNET	D12	DT	BL	NEWARK, NJ	DTVBL18795	212.6
	WYOU	D12	DT	BL	SCRANTON, PA	DTVBL17010	222.4
	WNAC-TV	D12	DT	LIC	PROVIDENCE, RI	BLCDT20090612AFT	239.4
	WNYI	D13	DT	CP	ITHACA, NY	BLANK0000025008	167.0

	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
	38151.4	1,967,183	31107.7	1,654,097	29907.2	1,622,811	29835.3	1,621,890	0.24 0.06

Undesired		Total IX	Unique IX, before	Unique IX, after
WGBY-TV D13 DT BL	64.0	1,389	4.0	93
WGBY-TV D13 DT APP	288.1	4,291		75.9 1,014
WWLP D11 DT LIC	91.9	1,693	20.0	12.0 44
WNET D12 DT BL	280.6	10,529	120.3	4,420 120.3 4,420
WYOU D12 DT BL	476.0	15,831	331.7	9,665 331.7 9,665
WNAC-TV D12 DT LIC	624.3	13,269	480.2	7,953 364.0 6,387

Interference to BLANK0000004731 LIC, scenario 3

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WNYT	D12	DT	LIC	ALBANY, NY	BLANK0000004731	

Table 1 WGBY-TV OET Bulletin 69 Interference Study
(page 3 of 8)



Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	119.6 km
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	119.6
	WWLP	D11	DT	LIC	SPRINGFIELD, MA	BLCDT20090612AJV	123.0
	WNET	D12	DT	BL	NEWARK, NJ	DTVBL18795	212.6
	WYOU	D12	DT	BL	SCRANTON, PA	DTVBL17010	222.4
	WNAC-TV	D12	DT	LIC	PROVIDENCE, RI	BLCDT20090612AFT	239.4
	WNYI	D13	DT	BL	ITHACA, NY	DTVBL34329	167.0

	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
38151.4	1,967,183	31107.7	1,654,097	29907.2	1,622,811	29835.3	1,621,890	0.24	0.06

Undesired				Total IX	Unique IX, before	Unique IX, after
WGBY-TV D13 DT BL	64.0			1,389	4.0	93
WGBY-TV D13 DT APP	288.1			4,291		75.9
WWLP D11 DT LIC	91.9			1,693	20.0	12.0
WNET D12 DT BL	280.6			10,529	120.3	4,420
WYOU D12 DT BL	476.0			15,831	331.7	9,665
WNAC-TV D12 DT LIC	624.3			13,269	480.2	7,953
						364.0
						6,387

Interference to BLANK0000004731 LIC, scenario 4

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WNYT	D12	DT	LIC	ALBANY, NY	BLANK0000004731	
Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	119.6 km
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	119.6
	WWLP	D11	DT	LIC	SPRINGFIELD, MA	BLCDT20090612AJV	123.0
	WNET	D12	DT	BL	NEWARK, NJ	DTVBL18795	212.6
	WYOU	D12	DT	BL	SCRANTON, PA	DTVBL17010	222.4
	WNAC-TV	D12	DT	LIC	PROVIDENCE, RI	BLCDT20090612AFT	239.4
	WNYI	D13	DT	BL	ITHACA, NY	DTVBL34329	167.0

	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
38151.4	1,967,183	31107.7	1,654,097	29907.2	1,622,811	29835.3	1,621,890	0.24	0.06

Undesired				Total IX	Unique IX, before	Unique IX, after
WGBY-TV D13 DT BL	64.0			1,389	4.0	93
WGBY-TV D13 DT APP	288.1			4,291		75.9
WWLP D11 DT LIC	91.9			1,693	20.0	12.0
WNET D12 DT BL	280.6			10,529	120.3	4,420
WYOU D12 DT BL	476.0			15,831	331.7	9,665
WNAC-TV D12 DT LIC	624.3			13,269	480.2	7,953
						364.0
						6,387

Interference to BLANK0000004731 LIC, scenario 5

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WNYT	D12	DT	LIC	ALBANY, NY	BLANK0000004731	
Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	119.6 km
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	119.6
	WWLP	D11	DT	LIC	SPRINGFIELD, MA	BLCDT20090612AJV	123.0
	WNET	D12	DT	BL	NEWARK, NJ	DTVBL18795	212.6
	WYOU	D12	DT	BL	SCRANTON, PA	DTVBL17010	222.4
	WNAC-TV	D12	DT	LIC	PROVIDENCE, RI	BLCDT20090612AFT	239.4
	WNYI	D13	DT	CP	ITHACA, NY	BLANK00000025008	167.0

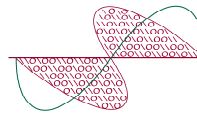
	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
38151.4	1,967,183	31107.7	1,654,097	29907.2	1,622,811	29835.3	1,621,890	0.24	0.06

Undesired				Total IX	Unique IX, before	Unique IX, after
WGBY-TV D13 DT BL	64.0			1,389	4.0	93
WGBY-TV D13 DT APP	288.1			4,291		75.9
WWLP D11 DT LIC	91.9			1,693	20.0	12.0
WNET D12 DT BL	280.6			10,529	120.3	4,420
WYOU D12 DT BL	476.0			15,831	331.7	9,665
WNAC-TV D12 DT LIC	624.3			13,269	480.2	7,953
						364.0
						6,387

Interference to BLANK0000004731 LIC, scenario 6

	Call	Chan	Svc	Status	City, State	File Number	Distance
--	------	------	-----	--------	-------------	-------------	----------

Table 1 WGBY-TV OET Bulletin 69 Interference Study
(page 4 of 8)



Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Desired:	WNYT	D12	DT	LIC	ALBANY, NY	BLANK0000004731		
Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	119.6	km
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	119.6	
	WWLP	D11	DT	LIC	SPRINGFIELD, MA	BLCDT20090612AJV	123.0	
	WNET	D12	DT	BL	NEWARK, NJ	DTVBL18795	212.6	
	WYOU	D12	DT	BL	SCRANTON, PA	DTVBL17010	222.4	
	WNAC-TV	D12	DT	LIC	PROVIDENCE, RI	BLCDT20090612AFT	239.4	
	WNYI	D13	DT	CP	ITHACA, NY	BLANK0000025008	167.0	
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
38151.4	1,967,183	31107.7	1,654,097	29907.2	1,622,811	29835.3	1,621,890	0.24 0.06

Undesired				Total IX	Unique IX, before	Unique IX, after
WGBY-TV D13 DT BL	64.0			1,389	4.0	93
WGBY-TV D13 DT APP	288.1			4,291		75.9 1,014
WWLP D11 DT LIC	91.9			1,693	20.0	204 12.0 44
WNET D12 DT BL	280.6			10,529	120.3	4,420 120.3 4,420
WYOU D12 DT BL	476.0			15,831	331.7	9,665 331.7 9,665
WNAC-TV D12 DT LIC	624.3			13,269	480.2	7,953 364.0 6,387

Interference to BLANK0000004731 LIC, scenario 7

	Call	Chan	Svc	Status	City, State	File Number	Distance		
Desired:	WNYT	D12	DT	LIC	ALBANY, NY	BLANK0000004731			
Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	119.6 km		
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	119.6		
	WWLP	D11	DT	LIC	SPRINGFIELD, MA	BLCDT20090612AJV	123.0		
	WNET	D12	DT	BL	NEWARK, NJ	DTVBL18795	212.6		
	WYOU	D12	DT	BL	SCRANTON, PA	DTVBL17010	222.4		
	WNAC-TV	D12	DT	LIC	PROVIDENCE, RI	BLCDT20090612AFT	239.4		
	WNYI	D13	DT	BL	ITHACA, NY	DTVBL34329	167.0		
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
38151.4	1,967,183	31107.7	1,654,097	29907.2	1,622,811	29835.3	1,621,890	0.24	0.06

Undesired				Total IX	Unique IX, before	Unique IX, after
WGBY-TV D13 DT BL	64.0			1,389	4.0	93
WGBY-TV D13 DT APP	288.1			4,291		75.9 1,014
WWLP D11 DT LIC	91.9			1,693	20.0	204 12.0 44
WNET D12 DT BL	280.6			10,529	120.3	4,420 120.3 4,420
WYOU D12 DT BL	476.0			15,831	331.7	9,665 331.7 9,665
WNAC-TV D12 DT LIC	624.3			13,269	480.2	7,953 364.0 6,387

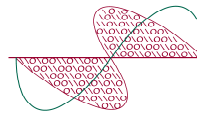
Interference to BLANK0000004731 LIC, scenario 8

Desired:	Call WNYT	Chan D12	Svc DT	Status LIC	City, State ALBANY, NY	File Number BLANK0000004731	Distance		
Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	119.6 km		
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	119.6		
	WWLP	D11	DT	LIC	SPRINGFIELD, MA	BLCDT20090612AJV	123.0		
	WNET	D12	DT	BL	NEWARK, NJ	DTVBL18795	212.6		
	WYOU	D12	DT	BL	SCRANTON, PA	DTVBL17010	222.4		
	WNAC-TV	D12	DT	LIC	PROVIDENCE, RI	BLCDT20090612AFT	239.4		
	WNYI	D13	DT	BL	ITHACA, NY	DTVBL34329	167.0		
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
38151.4	1,967,183	31107.7	1,654,097	29907.2	1,622,811	29835.3	1,621,890	0.24	0.06

Undesired				Total IX	Unique IX, before	Unique IX, after
WGBY-TV D13 DT BL	64.0			1,389	4.0	93
WGBY-TV D13 DT APP	288.1			4,291		75.9 1,014
WWLP D11 DT LIC	91.9			1,693	20.0	204 12.0 44
WNET D12 DT BL	280.6			10,529	120.3	4,420 120.3 4,420
WYOU D12 DT BL	476.0			15,831	331.7	9,665 331.7 9,665
WNAC-TV D12 DT LIC	624.3			13,269	480.2	7,953 364.0 6,387

Interference to BLCDT20090612AFT LIC, scenario 1

Table 1 WGBY-TV OET Bulletin 69 Interference Study
(page 5 of 8)



Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WNAC-TV	D12	DT	LIC	PROVIDENCE, RI	BLCDT20090612AFT	
Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	119.8 km
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	119.8
	WWLP	D11	DT	LIC	SPRINGFIELD, MA	BLCDT20090612AJV	119.7
	WENH-TV	D11	DT	LIC	DURHAM, NH	BLEDT20090817ABS	144.5
	WNET	D12	DT	BL	NEWARK, NJ	DTVBL18795	262.2
	WNYT	D12	DT	LIC	ALBANY, NY	BLANK0000004731	239.4
	WYOU	D12	DT	BL	SCRANTON, PA	DTVBL17010	389.7

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32316.5 7,310,183	30549.5 6,959,064	29950.0 6,874,968	29878.1 6,871,485	0.24 0.05

Undesired	Total IX	Unique IX, before	Unique IX, after
WGBY-TV D13 DT BL	24.0 1,352	0.0 0	
WGBY-TV D13 DT APP	168.1 11,117		71.9 3,483
WWLP D11 DT LIC	72.1 5,032	4.0 226	4.0 226
WENH-TV D11 DT LIC	76.2 31,847	60.1 18,695	60.1 18,695
WNET D12 DT BL	242.3 25,325	64.7 11,854	64.7 11,854
WNYT D12 DT LIC	466.7 52,832	225.0 22,605	196.9 20,183
WYOU D12 DT BL	4.0 409	0.0 0	0.0 0

Interference to BLCDT20090612AFT LIC, scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WNAC-TV	D12	DT	LIC	PROVIDENCE, RI	BLCDT20090612AFT	
Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	119.8 km
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	119.8
	WWLP	D11	DT	LIC	SPRINGFIELD, MA	BLCDT20090612AJV	119.7
	WENH-TV	D11	DT	LIC	DURHAM, NH	BLEDT20090817ABS	144.5
	WNET	D12	DT	BL	NEWARK, NJ	DTVBL18795	262.2
	WNYT	D12	DT	LIC	ALBANY, NY	BLANK0000004731	239.4
	WYOU	D12	DT	BL	SCRANTON, PA	DTVBL17010	389.7

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32316.5 7,310,183	30549.5 6,959,064	29950.0 6,874,968	29878.1 6,871,485	0.24 0.05

Undesired	Total IX	Unique IX, before	Unique IX, after
WGBY-TV D13 DT BL	24.0 1,352	0.0 0	
WGBY-TV D13 DT APP	168.1 11,117		71.9 3,483
WWLP D11 DT LIC	72.1 5,032	4.0 226	4.0 226
WENH-TV D11 DT LIC	76.2 31,847	60.1 18,695	60.1 18,695
WNET D12 DT BL	242.3 25,325	64.7 11,854	64.7 11,854
WNYT D12 DT LIC	466.7 52,832	225.0 22,605	196.9 20,183
WYOU D12 DT BL	4.0 409	0.0 0	0.0 0

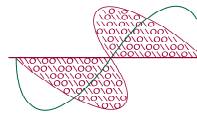
Interference to DTVBL72338 BL, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WHYY-TV	D13	DT	BL	WILMINGTON, DE	DTVBL72338	
Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	326.8 km
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	326.8
	WBAL-TV	D12	DT	CP	BALTIMORE, MD	BLANK0000024625	144.0
	WNET	D12	DT	BL	NEWARK, NJ	DTVBL18795	127.9
	WYOU	D12	DT	BL	SCRANTON, PA	DTVBL17010	137.7
	WNYI	D13	DT	CP	ITHACA, NY	BLANK0000025008	309.4
	WWPX-TV	D13	DT	BL	MARTINSBURG, WV	DTVBL23264	250.0

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
29500.0 10,378,663	27903.5 9,990,630	27446.5 9,823,360	27418.6 9,817,824	0.10 0.06

Undesired	Total IX	Unique IX, before	Unique IX, after
WGBY-TV D13 DT BL	0.0 0	0.0 0	
WGBY-TV D13 DT APP	48.0 21,141		28.0 5,536
WBAL-TV D12 DT CP	51.7 2,321	4.0 105	4.0 105
WNET D12 DT BL	116.2 127,910	116.2 127,910	96.2 112,305
WYOU D12 DT BL	4.0 101	4.0 101	4.0 101

Table 1 WGBY-TV OET Bulletin 69 Interference Study
(page 6 of 8)



Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

WWPX-TV D13 DT BL 332.8 39,154 285.2 36,938 285.2 36,938

Interference to DTVBL72338 BL, scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WHYY-TV	D13	DT	BL	WILMINGTON, DE	DTVBL72338	
Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	326.8 km
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	326.8
	WBAL-TV	D12	DT	CP	BALTIMORE, MD	BLANK0000024625	144.0
	WNET	D12	DT	BL	NEWARK, NJ	DTVBL18795	127.9
	WYOU	D12	DT	BL	SCRANTON, PA	DTVBL17010	137.7
	WNYI	D13	DT	BL	ITHACA, NY	DTVBL34329	309.3
	WWPX-TV	D13	DT	BL	MARTINSBURG, WV	DTVBL23264	250.0

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	29500.0 10,378,663	27903.5	9,990,630	27446.5	9,823,360	27418.6 9,817,824	0.10 0.06
Undesired			Total IX	Unique IX, before		Unique IX, after	
WGBY-TV D13 DT BL	0.0		0	0.0		0	
WGBY-TV D13 DT APP	48.0		21,141			28.0	5,536
WBAL-TV D12 DT CP	51.7		2,321	4.0		105	105
WNET D12 DT BL	116.2		127,910	116.2		127,910	96.2 112,305
WYOU D12 DT BL	4.0		101	4.0		101	4.0 101
WWPX-TV D13 DT BL	332.8		39,154	285.2		36,938	285.2 36,938

Interference to DTVBL72338 BL, scenario 3

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WHYY-TV	D13	DT	BL	WILMINGTON, DE	DTVBL72338	
Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	326.8 km
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	326.8
	WBAL-TV	D12	DT	BL	BALTIMORE, MD	DTVBL65696	144.0
	WNET	D12	DT	BL	NEWARK, NJ	DTVBL18795	127.9
	WYOU	D12	DT	BL	SCRANTON, PA	DTVBL17010	137.7
	WNYI	D13	DT	CP	ITHACA, NY	BLANK0000025008	309.4
	WWPX-TV	D13	DT	BL	MARTINSBURG, WV	DTVBL23264	250.0

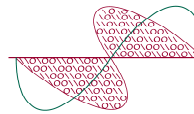
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	29500.0 10,378,663	27903.5	9,990,630	27450.5	9,823,465	27422.5 9,817,929	0.10 0.06
Undesired			Total IX	Unique IX, before		Unique IX, after	
WGBY-TV D13 DT BL	0.0		0	0.0		0	
WGBY-TV D13 DT APP	48.0		21,141			28.0	5,536
WBAL-TV D12 DT BL	43.6		1,840	0.0		0	0
WNET D12 DT BL	116.2		127,910	116.2		127,910	96.2 112,305
WYOU D12 DT BL	4.0		101	4.0		101	4.0 101
WWPX-TV D13 DT BL	332.8		39,154	289.2		37,314	289.2 37,314

Interference to DTVBL72338 BL, scenario 4

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WHYY-TV	D13	DT	BL	WILMINGTON, DE	DTVBL72338	
Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	326.8 km
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	326.8
	WBAL-TV	D12	DT	BL	BALTIMORE, MD	DTVBL65696	144.0
	WNET	D12	DT	BL	NEWARK, NJ	DTVBL18795	127.9
	WYOU	D12	DT	BL	SCRANTON, PA	DTVBL17010	137.7
	WNYI	D13	DT	BL	ITHACA, NY	DTVBL34329	309.3
	WWPX-TV	D13	DT	BL	MARTINSBURG, WV	DTVBL23264	250.0

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	29500.0 10,378,663	27903.5	9,990,630	27450.5	9,823,465	27422.5 9,817,929	0.10 0.06
Undesired			Total IX	Unique IX, before		Unique IX, after	
WGBY-TV D13 DT BL	0.0		0	0.0		0	
WGBY-TV D13 DT APP	48.0		21,141			28.0	5,536
WBAL-TV D12 DT BL	43.6		1,840	0.0		0	0

Table 1 WGBY-TV OET Bulletin 69 Interference Study
(page 7 of 8)



Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

WNET D12 DT BL	116.2	127,910	116.2	127,910	96.2	112,305
WYOU D12 DT BL	4.0	101	4.0	101	4.0	101
WWFX-TV D13 DT BL	332.8	39,154	289.2	37,314	289.2	37,314

Interference to BLCDT20101215AIS LIC, scenario 1
Proposal causes no interference.

Interference to BLANK0000025008 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WNYI	D13	DT	CP	ITHACA, NY	BLANK0000025008	
Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	284.3 km
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	284.3
	WNYT	D12	DT	LIC	ALBANY, NY	BLANK0000004731	167.0
	WHYY-TV	D13	DT	BL	WILMINGTON, DE	DTVBL72338	309.4
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
13763.8 1,126,213		12320.3 987,989		12320.3 987,989		12308.3 984,822	0.10 0.32
Undesired		Total IX		Unique IX, before		Unique IX, after	
WGBY-TV D13 DT BL		0.0 0		0.0 0			
WGBY-TV D13 DT APP		12.0 3,167				12.0 3,167	

Interference to DTVBL34329 BL, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WNYI	D13	DT	BL	ITHACA, NY	DTVBL34329	
Undesireds:	WGBY-TV	D13	DT	BL	SPRINGFIELD, MA	DTVBL72096	284.3 km
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	284.3
	WNYT	D12	DT	LIC	ALBANY, NY	BLANK0000004731	167.0
	WHYY-TV	D13	DT	BL	WILMINGTON, DE	DTVBL72338	309.3
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
13772.0 1,122,045		12332.5 980,438		12332.5 980,438		12320.6 977,271	0.10 0.32
Undesired		Total IX		Unique IX, before		Unique IX, after	
WGBY-TV D13 DT BL		0.0 0		0.0 0			
WGBY-TV D13 DT APP		12.0 3,167				12.0 3,167	

Interference to proposal, scenario 1
2.26% interference

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	
Undesireds:	WNYT	D12	DT	LIC	ALBANY, NY	BLANK0000004731	119.6 km
	WNAC-TV	D12	DT	LIC	PROVIDENCE, RI	BLCDT20090612AFT	119.8
	WHYY-TV	D13	DT	BL	WILMINGTON, DE	DTVBL72338	326.8
	WABI-TV	D13	DT	LIC	BANGOR, ME	BLCDT20101215AIS	397.1
	WNYI	D13	DT	CP	ITHACA, NY	BLANK0000025008	284.3
Service area		Terrain-limited		IX-free		Percent IX	
32403.5 4,470,009		26591.4 3,739,675		25929.6 3,655,254		2.49 2.26	
Undesired		Total IX		Unique IX		Prcnt Unique IX	
WNYT D12 DT LIC		156.1 2,009		132.1 1,742		0.50 0.05	
WNAC-TV D12 DT LIC		408.9 69,682		408.9 69,682		1.54 1.86	
WHYY-TV D13 DT BL		116.9 12,997		96.9 12,730		0.36 0.34	
WNYI D13 DT CP		4.0 0		0.0 0		0.00 0.00	

Interference to proposal, scenario 2
2.26% interference

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WGBY-TV	D13	DT	APP	SPRINGFIELD, MA	WGBY-TV 30KW_PROP	

Table 1 WGBY-TV OET Bulletin 69 Interference Study
(page 8 of 8)



Undesireds:	WNYT	D12	DT	LIC	ALBANY, NY	BLANK0000004731	119.6 km
	WNAC-TV	D12	DT	LIC	PROVIDENCE, RI	BLCDT20090612AFT	119.8
	WHYY-TV	D13	DT	BL	WILMINGTON, DE	DTVBL72338	326.8
	WABI-TV	D13	DT	LIC	BANGOR, ME	BLCDT20101215AIS	397.1
	WNYI	D13	DT	BL	ITHACA, NY	DTVBL34329	284.3

Service area		Terrain-limited		IX-free		Percent IX	
32403.5	4,470,009	26591.4	3,739,675	25929.6	3,655,254	2.49	2.26

Undesired	Total IX		Unique IX		Prcnt Unique IX	
WNYT D12 DT LIC	156.1	2,009	132.1	1,742	0.50	0.05
WNAC-TV D12 DT LIC	408.9	69,682	408.9	69,682	1.54	1.86
WHYY-TV D13 DT BL	116.9	12,997	96.9	12,730	0.36	0.34
WNYI D13 DT BL	4.0	0	0.0	0	0.00	0.00

Channel and Facility Information

Section	Question	Response
Proposed Community of License	Facility ID	72096
	State	Massachusetts
	City	SPRINGFIELD
	DTV Channel	13
Facility Type	Facility Type	Noncommercial Educational
	Station Type	Main
Zone	Zone	1

Antenna Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	No
	ASR Number	
Coordinates (NAD83)	Latitude	42° 14' 29.5" N+
	Longitude	072° 38' 54.1" W-
	Structure Type	LTOWER-Lattice Tower
	Overall Structure Height	43.9 meters
	Support Structure Height	30.5 meters
	Ground Elevation (AMSL)	366 meters
Antenna Data	Height of Radiation Center Above Ground Level	36.3 meters
	Height of Radiation Center Above Average Terrain	303.2 meters
	Height of Radiation Center Above Mean Sea Level	402.3 meters
	Effective Radiated Power	30 kW

Antenna
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Non-Directional
	Do you have an Antenna ID?	
	Antenna ID	
Antenna Manufacturer and Model	Manufacturer:	ERI
	Model	ATW7xVS5-ETOX-13H
	Rotation	
	Electrical Beam Tilt	1.25
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Elliptical
DTV and DTS: Elevation Pattern	Does the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	No
	Uploaded file for elevation antenna (or radiation) pattern data	

Construction
Permit
Certifications

Section	Question	Response
Post-Incentive Auction Expedited Processing	It will operate on the DTV channel for this station as established in the post-incentive auction channel reassignment public notice.	Yes
	It will operate post-incentive auction facilities that do not expand the noise-limited service contour in any direction beyond that established by the post-incentive auction channel reassignment public notice.	No
	It will operate post-incentive auction facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the post-incentive auction channel reassignment public notice.	Yes
	The antenna structure to be used by this facility has been registered by the Commission and will not require re-registration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely affect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7.	Yes
Environmental Effect	Would a Commission grant of Authorization for this location be an action which may have a significant environmental effect? (See Section 1.1306 of 47 C.F.R.)	No
Broadcast Facility	The proposed facility complies with the applicable engineering standards and assignment requirements of 47 C. F.R. Sections 73.616, 73.622(i), 73.623(e), 73.625, 73.1030, and 73.1125.	Yes